

The following claims are presented for examination:

1. (currently amended) A **modulated power supply including a voltage summer, a first voltage source, and a second voltage source, for providing a modulated power supply voltage, the** voltage summer including a transformer having a primary side and a secondary side, wherein ~~[[a]] the~~ first voltage ~~to-be-summed source~~ is connected to **provide a first voltage to one the primary side of the transformer,** and ~~[[a]] the~~ second voltage ~~to-be-summed source~~ is connected to **provide a second voltage to another the secondary side of the transformer, wherein the transformer provides a modulated output voltage representing the first voltage adjusted by the second voltage.**

2. (currently amended) A ~~voltage summer~~ **modulated power supply** according to claim 1, wherein the first voltage is connected between the first tap of the primary side and the second tap of the primary side, and the second voltage is connected to a first tap of the secondary side, ~~a summed the modulated output~~ voltage being provided on a second tap of the primary or secondary side.

3. (currently amended) A ~~voltage summer~~ **modulated power supply** according to claim 2, wherein the first voltage is greater than the second voltage and the ~~summed~~ **modulated output** voltage is provided on the second tap of the primary side of the transformer.

4. (currently amended) A ~~voltage summer~~ **modulated power supply** according to claim 1 wherein the first voltage is a variable voltage.

5. (currently amended) A ~~voltage summer~~ **modulated power supply** according to claim 4 wherein the first voltage is provided by a first switchable voltage source.

6. (currently amended) A ~~voltage summer~~ **modulated power supply** according to claim 4 wherein the second voltage is **a** variable **voltage.**

7. (currently amended) A ~~voltage summer~~ **modulated power supply** according to claim 6 wherein the second voltage is provided by a second switchable voltage source.

8. (currently amended) A ~~voltage summer~~ **modulated power supply** according to claim 6 wherein the first voltage is variable between n levels and the second voltage is variable between m levels, wherein the summed voltage is variable between n*m levels.

9. (currently amended) A ~~voltage-summer~~ modulated power supply according to claim 6 wherein the second voltage is provided by a continuously variable voltage source.

10. (currently amended) A ~~voltage-summer~~ modulated power supply according to claim 6 wherein the second voltage is provided by a fixed voltage source.

11. (currently amended) A ~~voltage-summer~~ modulated power supply according to claim 1 wherein the first voltage is a coarse voltage signal and the second voltage is a fine voltage signal.

12. (currently amended) A ~~voltage-summer~~ modulated power supply according to claim 11 wherein the fine voltage signal is representative of an error in the coarse voltage signal.

13. (currently amended) A ~~voltage-summer~~ modulated power supply according to claim 12, further including a reference voltage source, and a difference means for removing the reference voltage from the summed voltage to generate the second voltage.

14. (currently amended) A ~~voltage-summer~~ modulated power supply according to claim 12, further including a reference current source, a means for sensing the current in the primary side of the transformer, a difference means for removing the reference current from the sensed current to generate a difference current, and a driver for supplying the second voltage in dependence on the difference current.

15. (cancelled)

16. (currently amended) A method of ~~summing-voltages~~ providing a modulated power supply including applying a first voltage to ~~a primary one~~ side of a transformer and applying a second voltage to ~~a secondary another~~ side of the transformer, wherein a sum of the first and second voltages ~~is provided~~ provides a modulated output voltage on one of the first or second sides of the transformer representing the first voltage adjusted by the second voltage.

17. (currently amended) A method of providing a modulated power supply according to claim 16, wherein the first voltage is applied between ~~[[the]]~~ a first tap of ~~[[the]]~~ a primary side and ~~[[the]]~~ a second tap of the primary side, and the second voltage is applied to a first tap of ~~[[the]]~~ a secondary side, wherein ~~a-summed the~~ modulated output voltage is provided on a second tap of the primary or secondary side.

18. (currently amended) A method **of providing a modulated power supply** according to claim 17, wherein the first voltage is greater than the second voltage and the **summed modulated output** voltage is provided on the second tap of the primary side of the transformer.

19. (currently amended) A method **of providing a modulated power supply** according to claim 16 further comprising the step of varying the first voltage.

20. (currently amended) A method **of providing a modulated power supply** according to claim 16 further comprising the step of varying the second voltage.

21. (currently amended) A method **of providing a modulated power supply** according to claim 19 comprising varying the first voltage between n levels and varying the second voltage between m levels, wherein the **summed modulated output** voltage is thereby variable between $n*m$ levels.

22. (currently amended) A method **of providing a modulated power supply** according to claim 16 wherein the first voltage is a coarse voltage signal and the second voltage is a fine voltage signal.

23. (currently amended) A method **of providing a modulated power supply** according to claim 22 wherein the fine voltage signal is representative of an error in the coarse voltage signal.

24. (currently amended) A method **of providing a modulated power supply** according to claim 16, further including the step of generating a reference voltage, and removing the reference voltage from the summed voltage to thereby generate the second voltage.

25. (currently amended) A method **of providing a modulated power supply** according to claim 16, further including the step of generating a reference current, sensing the current in the primary side of the transformer, removing the reference current from the sensed current to generate a difference current, and supplying the second voltage in dependence on the difference current.

Claims 26-40. (cancelled)

41. (new) A modulated power supply according to claim 1 wherein the first voltage source is independent of the second voltage source.

42. (new) A modulated power supply according to claim 1 wherein the first voltage is directly connected to the one side of the transformer and the second voltage is directly connected to the other side of the transformer.

43. (new) A method according to claim 16 wherein the first voltage is independent of the second voltage.

44. (new) A method according to claim 16 comprising directly connecting the main voltage to the one side of the transformer and directly connecting the correction voltage to the other side of the transformer.